Trouble Reports taken from Physics Logs and MCR Logs 10-08 thru 10-14-01

Monday: 10-08-01

- 01:16:32- Beam Abort, 10a-ps3.A dropped Blue Quench
- 01:16:32- Quench Link Interlock in Blue ring, 10a-ps3.A dropped first

comment by...jak -- This QLI occurred during a ramp to injection. I believe that this quench link was due to a gas cooled lead. I contacted the CCR to determine the status of the recovery from when they had called at 0105. Ken reported that the temperatures were below their prescribed running limit at 0105. However, he reported that the 10 and 11 o'clock regions cooled substantially more since they reported that they were ready to run. He is going to plot the trend and watch the next hysteresis attempt closely.

- 08:20- There is a comm failure for 7a correctors. Rob reset the 7a PLC.
- 12:43:55- Tunnel access permitted, y09-tv3 has been replaced. Work for yi2-qs3 will be deferred to later on.
- 12:24:24- Beam Abort, 6b-ps1 dropped {PASS Division B}
- 12:55:16- Quench, 8b-ps1 blue

qpa faults: none, all off, qpa alarms: no neg tq's, post mortems: many show drops in current and tq's show spikes before T=zero. POWER DIP.

12:55:16- Quench 2b-ps1 yellow

qpa faults: none all off, qpa alarms: no neg tq's, post mortems: many show drops in current and tq's show spikes before T=zero. POWER DIP

14:52:20- MCR getting back at injection - yo9-qgt gamma-t found to be OFF, they were able to get it back on.

Tuesday: 10-09-01

- 04:33:50- Beam Abort, 5e-ps2.A dropped {Loss Monitor 1}
- 04:33- RHIC beam aborted but loss monitor input from 5e-blm1. yi2-tv18 also tripped at the same time.
- 18:43:12- Beam Abort, 11b-ps1 dropped Yellow Quench Sequencerr: Sequencer -->
- 18:43:13- Quench Link Interlock in Yellow ring, 11b-ps1 dropped first Sequencer
- 18:43:13- Quench Link Interlock in Blue ring, 3b-ps1 dropped first

Blue and Yellow Ring Quench Link Interlock just as a hystersis ramp was started without beam.

21:30- cfe-1a-ps1, cfe-1b-ps1, and cfe-10a-ps1 was reset

Wednesday: 10-10-01

- 03:09:50- Beam Abort, 10a-ps3.A dropped {Loss Monitor 1}
- 03:09:50- Quench Link Interlock in Blue ring, 11b-ps1 dropped first
- 03:09:51- Quench Link Interlock in Yellow ring, 9b-ps1 dropped first

QLI in Blue and Yellow while dumping beam. Loss monitors in Sectors 8 and 10 also dropped the permit link. Cryo estimates about 1.5 hours to recover.

comment by...gjm -- "This is the ramp that had the QLI when we dumped - lots of debunched beam. It looks like it was bad right from prep; maybe some RF setup? We were having problems getting through Sequences because of the WCM Manager, which we called Johannes for."

- 05:40:43- Beam Abort, 2b-ps1 dropped {PASS Division B} comment by...gjm -- fill 1273 dumped from sector 2 chipmunk.
- 06:05:59- Shift Summary: attempt at one more store before maintenance didn't go too well. both ramps ended badly. gjm

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MAINTENANCE:

Snake power supply work in alcoves 3c & 9c, replacement of corrector power supplies, cleaning of several IR power supplies, etc...

The following Quenches occurred during Maintenance, see George and Wing as they found problems related to the blue and yellow rings.

19:17:28- Quench Link Interlock in Blue ring, 11b-ps1 dropped first 19:53:18- Quench Link Interlock in Blue ring, 11b-ps1 dropped first 20:47:41- Quench Link Interlock in Yellow ring, 11b-ps1 dropped first 20:59:48- Quench Link Interlock in Blue ring, 4b-time.B dropped first 21:12:44- Quench Link Interlock in Blue ring, 4b-time.B dropped first 22:10:22- Quench Link Interlock in Blue ring, 4b-time.B dropped first 22:10:23- Quench Link Interlock in Yellow ring, 4b-time.B dropped first

Thursday: 10-11-01:

Maintenance Continues throughout the day and into the evening.

The following Quenches occurred due to bringing back on from the Maintenance period.

19:14:48- Quench Link Interlock in Yellow ring, 3b-ps1 dropped first

19:15:54- Quench Link Interlock in Blue ring, 10a-ps3.A dropped first

19:57:18- Quench Link Interlock in Yellow ring, 4b-time. A dropped first

19:57:23- Quench Link Interlock in Blue ring, 1b-ps1 dropped first

<u>Additional</u> Notes:

G. Ganetis and J. Laster have requested a hardware specialist for timing. The F0 through L1 of 10a-ps1 has no 720 Hz clock. B. Venagas is being contacted and has come in to check out the 720 Hz clock problem in 10a. However, A. Marusic has just finished correcting the problem by reloading the cache for 10a-ps1.

Friday: 10-12-01

MAINTENANCE ENDS:

01:19:22- Quench Link Interlock in Blue ring, 10a-ps3.B dropped first qpa faults: none, qpa alarms: no data, post mortems: power supplies near zero current, very noisy and unable to determine any true drops.

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02:53:14- Beam Abort, 10a-ps3.A dropped {Loss Monitor 2}
02:56:43- Quench Link Interlock in Yellow ring, 11b-ps1 dropped first
MCR Log reports that permit.8b-ps1 failed but it was 11b-ps1
(02:56:40)- Quench Link Interlock in Yellow, 11b-ps1
qpa faults; none
qpa alarms; (several) 11b-qd1 went first Y10DSA5_A4VT Tq= -23 3b-qd1 Y2DSA5_A4VT
Tq= -12, 5b-qd1 Y4DSA5_A4VT Tq= -23 9b-qd1 Y8DSA5_A4VT Tq= -23,
post mortems show nothing unusual
Cause for the quench: Main P.S. glitch.
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14:07:59- ps compare shows that q6 power supplies did not work properly last ramp (1182) *Cause:* Problem unknown.

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Cryo reports that they have to make an entry into 10GE1. Dumping the store.

16:24:11- Beam Abort, 12a-ps1.A dropped {Loss Monitor 1}

16:24:11- Quench Link Interlock in Blue ring, 11b-ps1 dropped first

Actual time: (16:24:04 2368383)

QPA Faults: b12-dhx-qp Crow, QPA Alarms: 11b-qd1 B10DSA5_A4VT Tq= -24

Also shows 6b-qd1@ 09:49:21 B5TQ4-VT

Post Mortems: nothing unusual, bo11-tq4 has a current glitch (spike) -1.31 before T=zero

17:16:53- Quench Link Interlock in Yellow ring, 10a-ps3.A dropped first

CCR reports that they see elevated temperatures in both rings.

Actual time: (17:16:52 651037)

QPA Faults: Bi9-dhx-qp Crow QPA Alarms: 10a-qd2 Y9DRDO_DO Tq= -23

Post Mortems: ramping, nothing unusual

18:46:51- Beam Abort, 12a-ps1.A dropped Blue Quench

18:46:51- Quench Link Interlock in Blue ring, 12a-ps1.A dropped first

Actual time: (18:46:44 1420632)

QPA Faults: none, QPA Alarms: no data, QD status shows running

Post Mortems: power supplies at zero current, b12-qf1-ps shows a voltage spike -1.2 before

T=zero

19:20:02 & 19:53:09- Beam Abort, 6b-ps1 dropped {Cryo Lead Flow}

Cryo reports that they have restored PLC communication but in the meantime ring Temperatures have risen and many recooler pots are depleted, which will take some time to recover.

Saturday: 10/13/01

03:59:44- Beam Abort, 10a-ps3.A dropped {Loss Monitor 2}

04:09:17- Quench Link Interlock in Yellow ring, 11b-ps1 dropped first while ramping back to injection.

Actual Time: (04:09:12 3933785)

QPA Faults: none, QPA Alarms: 11b-qd1 Y10DSA5_A4VT Tq= -23 (others also included: 3b-qd1 Tq-12, 5b-qd1 Tq-23 and 9b-qd1 Tq-23)

Post Mortems: ramping down, nothing unusual

04:54:04- Beam Abort, 10a-ps3.A dropped {Loss Monitor 2}

04:59:26- Quench Link Interlock in Yellow ring, 3b-ps1 dropped first

Actual time: (04:59:24 1148155)

QPA Faults: none, QPA Alarms: 3b-qd1 Y2DSA5_A4VT Tq= -23

(All others show neg tq's except for 4b-qd2 & 10a-qd2)

Post Mortems: ramping down, nothing unusual

11:54:24- Beam Abort, 10a-ps3.A dropped {Loss Monitor 1}

11:54:24- Quench Link Interlock in Yellow ring, 9b-ps1 dropped first

Actual time: (11:54:16 651003)

QPA Faults: none, QPA Alarms: 9b-qd1 Y9DSA2_A1VT Tq=-23

Post Mortems: nothing unusual

The beam was dumped to get a new fill, and the unbunched beam caused a Yellow QLI. 9b-ps1 pulled the permit.

17:10- RHIC cryogenic has requested a ring entry investigate a snake mag. lead temperature indicator problem. Cryogenic personnel replaced the analog input card for the snake mag. lead temperature indicator.

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21:26:59- Beam Abort, 10a-ps3.A dropped {Loss Monitor 2}

21:29:53- Quench Link Interlock in Yellow ring, 11b-ps1 dropped first

Yellow QLI from 11b-ps1 was caused while ramping down to injection.

Actual time: (21:29:15 300810)

QPA Faults: none, QPA Alarms: 11b-qd1 Y10DSA4_A3VT Tq= -23

(also 5b-qd1 Tq-23 and 9b-qd1 Tq-23)

Post Mortems: nothing unusual

22:15:02- Beam Abort, 10a-ps3.A dropped {Loss Monitor 2}

22:24:01- Quench Link Interlock in Yellow ring, 3b-ps1 dropped first

Yellow QLI from 3b-ps1 while ramping down to injection. Contacted C. Schultheiss who will examine the problem from home. After discussing the problem with Carl and A. Marusic, MCR rebooted cfe-4b-ps2 then restored the quench link.

Actual time: (22:23:56 3649933)

QPA Faults: none, QPA Alarms: 3b-qd1 Y2DSA5_A4VT Tq= -23

(also 1b-qd1 Tq-11, 7b-qd1 Tq-11 and 11b-qd1 Tq-11)

Post Mortems: ramping down, yellow main dipole shows rise and drops on flat current, ramp current and p.s. voltage.

Sunday: 10/14/01

22:03:51- Beam Abort, 10a-ps3.A dropped {Loss Monitor 2}

22:03:52- Quench Link Interlock in Blue ring, 10a-ps3.A dropped first

Actual time: (22:03:40 3532608)

QPA Faults: QPO7-R10ABQF3 bo10-qd3-qp Crow and bi9-dhx-qp Crow

QPA Alarms: no neg Tq's

Post Mortems: Many supplies show current, error and voltage fluctuation before the event.

Iref for bo10-qd7 dropped before T=zero.